

from 3° to 30° is imparted to liquid-crystal molecules lying in proximity to the active matrix substrate.

11. (Amended) An electronic device according to claim 10 further comprising a second orientation film (42) that is formed on a surface of the opposite substrate by effecting an orientation process in a second orientation direction (Rb) that crosses with the first orientation direction with a right angle therebetween, wherein the first and second orientation direction are respectively slanted by an angle of about 45° against the alignment directions of the first and second groups of pixel electrodes, and wherein one of the first and second orientation directions is directed towards the first group of pixel electrodes in plan view, while the other is directed towards the second group of pixel electrodes in plan view.

Contd
B1
12. (Amended) An electronic device according to claim 10, wherein the pre-tilt angle ranging from 3° to 30° is imparted to liquid-crystal molecules lying in proximity to the active matrix substrate by forming pillar structures that are made of an inorganic material and are slanted in a specific direction on the active matrix substrate.

13. (Amended) An electronic device according to claim 10, wherein the pre-tilt angle ranging from 3° to 30° is imparted to liquid-crystal molecules lying in proximity to the active matrix substrate by forming mixtures of first and second pillar structures that are made of an inorganic material and are respectively slanted in different directions in plan view on the active matrix substrate.

14. (Amended) An electronic device according to claim 10, wherein a planarization process is performed on prescribed regions for wiring signal lines driving the pixel electrodes and other regions for arranging the pixel electrodes on the active matrix substrate.

15. (Twice Amended) The electronic device according to claim 10, which is a projector comprising a light modulator for modulating light to be projected onto a screen by the active-matrix liquid crystal display.

22. (Twice Amended) An active-matrix liquid crystal display according to claim 19, wherein the liquid-crystal molecules lying in proximity to the active matrix substrate are oriented in the non-power mode in such a way that the long-axis directions thereof are slanted against alignment directions of the first and second groups of pixel electrodes, and are twisted in such a way that the long-axis directions thereof extend from the active matrix substrate to the opposite substrate and lie across the first and second groups of pixel electrodes in plan view.

23. (Amended) An electronic device having an active-matrix liquid crystal display comprising:

an active matrix substrate for fabricating a first group of pixel electrodes that are aligned in a prescribed direction and are supplied with picture signals of a first polarity, and a second group of pixel electrodes that are aligned to adjoin with the first group of pixel electrodes respectively and are supplied with picture signals of a second polarity;

an opposite substrate that is arranged oppositely to the active matrix substrate; and

a liquid crystal layer that is held between the active matrix substrate and the opposite substrate,

wherein liquid-crystal molecules contained in the liquid crystal layer are subjected to prescribed orientations in a non-power mode in such a way that a first pre-tilt angle, which ranges from 3° to 30° , imparted to liquid-crystal molecules lying in proximity to the active matrix substrate becomes larger than a second pre-tilt angle imparted to liquid-crystal molecules lying in proximity to the opposite substrate.

24. (Amended) An electronic device according to claim 23, wherein the liquid-crystal molecules lying in proximity to the active matrix substrate are initially oriented in a specific direction (Ra) in the non-power mode in such a way that the long-axis directions thereof are made substantially parallel with alignment directions of the first and second groups of pixel electrodes on the active matrix substrate.

25. (Amended) An electronic device according to claim 23, wherein the liquid-crystal molecules lying in proximity to the active matrix substrate are oriented in the non-power mode in such a way that the long-axis directions thereof are slanted against alignment directions of the first and second groups of pixel electrodes, and are twisted in such a way that the long-axis directions thereof extend from the active matrix substrate to the opposite substrate and lie across the first and second groups of pixel electrodes in plan view.

26. (Twice Amended) The electronic device according to claim 23, which is a projector comprising a light modulator for modulating light to be projected onto a screen by the active-matrix liquid crystal display.

Please add new claims 27-28 as follows:

--27. An electronic device having an active-matrix liquid crystal display in which a liquid crystal layer (50) is held between an active matrix substrate (10) and an opposite substrate (20), said electronic device comprising:

a first group of pixel electrodes (9) that are aligned in a prescribed direction on the active matrix substrate and that are supplied with picture signals of a first polarity; and

a second group of pixel electrodes (9) that are aligned to adjoin with the first group of pixel electrodes respectively and that are supplied with picture signals of a second polarity,

wherein within the liquid crystal layer, liquid-crystal molecules lying in proximity to the active matrix substrate are initially subjected to a prescribed orientation in a non-power mode so that long-axis directions thereof substantially match alignment directions of the first and second groups of pixel electrodes respectively.--

--28. An electronic device having an active-matrix liquid crystal display in which a liquid crystal layer (50) is held between an active matrix substrate (10) and an opposite substrate (20), said electronic device comprising:

a first group of pixel electrodes (9) that are aligned in a prescribed direction on the active matrix substrate and that are supplied with picture signals of a first polarity; and

a second group of pixel electrodes (9) that are aligned to adjoin with the first group of pixel electrodes respectively and that are supplied with picture signals of a second polarity,

wherein within the liquid crystal layer, liquid-crystal molecules lying in proximity to the active matrix substrate are initially subjected to an orientation providing a prescribed orientation direction in a non-power mode so that long-axis directions thereof are slanted with respect to alignment directions of the first and second groups of pixel electrodes respectively, and they are also twisted to lie across the first and second groups of pixel electrodes respectively in plan view when being extended from the active-matrix substrate to the opposite substrate.--

Contd
B3

REMARKS

Claims 1-28 are pending. By this Preliminary Amendment, claims 10-15 and 22-26 are amended and claims 27-28 are added. Prompt and favorable consideration on the merits is respectfully requested.

The attached Appendix includes marked-up copies of each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Thomas J. Pardini
Registration No. 30,411

JAO:TJP/zmc
Attached: APPENDIX
Date: May 2, 2002

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
--